GP 1635

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):	Eric T. Kool	Group Art Unit:	1635
Serial No.:	09/997,931	Examiner:	S. McGarry
Filed:	11/30/01	Docket No.:	220.00010150
		Conf. No.:	5355
Title:	CIRCULAR DNA VECTORS FOR SYNTHESIS OF RNA AND DNA		

Assistant Commissioner for Patents
P.O. Box 2327
Arlington, VA 22202

We are transmitting the following documents along with this Transmittal Sheet (which is submitted in triplicate):

X **Small entity status is entitled to be asserted in the above-identified application.**
X An itemized return postcard.
__ A Petition for Extension of Time for _ month(s) and a check in the amount of $_ for the required fee.
X An Information Disclosure Statement (4 pgs); 1449 forms (10 pgs); and copies of 29 documents.
__ A check in the amount of $_, representing ___.
__ A certified copy of a _ application, Serial No. _, filed _____, the right of priority of which is claimed under 35 U.S.C. §119.
__ Other: ___.
__ Amendment ___ No Additional fee is required. ___ The fee has been calculated as shown:

Fee Calculation for Claims Pending After Amendment					
	Pending Claims after Amendment (1)	Claims Paid for Earlier (2)	Number of Additional Claims (1-2)	Cost per Additional Claim	Additional Fees Required
Total Claims				x $9 =	
Independent Claims				x $42 =	
One or More New Multiple Dependent Claims Presented? If Yes, Add $140 Here →					
Total Additional Claim Fees Required					

Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers and please charge any additional fees or credit overpayment to Deposit Account No. 13-4895. Triplicate copies of this sheet are enclosed.

CERTIFICATE UNDER 37 C.F.R. §1.8: The undersigned hereby certifies that this Transmittal Letter and the paper(s), as described hereinabove, are being deposited in the United States Postal Service, as first class mail, in an envelope addressed to: Assistant Commissioner for Patents, P.O. Box 2327, Arlington, VA 22202, on this 24th day of June, 2002.

MUETING, RAASCH & GEBHARDT, P.A.
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PATENT
Docket No. 220.0001 0150

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#7/K.T.
7/2
I.D.S.

Applicant(s):	Eric T. Kool	)	Group Art Unit:	1635
Serial No.:	09/997,931	)	Examiner:	S. McGarry
Filed:	November 30, 2001	)		
For:	CIRCULAR DNA VECTORS FOR SYNTHESIS OF RNA AND DNA			

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents
P.O. Box 2327
Arlington, VA 22202

Sir:

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with C.F.R. §§ 1.97 *et. seq.*, the materials enclosed herewith are brought to the attention of the Examiner as possibly being of interest in connection with the above-identified patent application. Consideration of each of the documents listed on the attached 1449 forms is respectfully requested. Pursuant to the provisions of M.P.E.P. §609, Applicant further requests that a copy of the 1449 forms, marked as being considered and initialed by the Examiner, be returned with the next Official Communication.

The present application is a continuation-in-part application of co-pending U.S. patent application Serial No. 09/569,344, filed May 11, 2000 (now issued as U.S. Patent No. 6,368,802 on April 9, 2002), which is a continuation application of U.S. patent application Serial No. 08/805,631, filed February 26, 1997 (now issued as U.S. Patent No. 6,096,880 on August 1, 2000), which is a continuation-in-part application of U.S. patent application Serial No. 08/393,439, filed February 23, 1995 (now issued as U.S. Patent No. 5,714,320 on February 3, 1998), which is a continuation-in-part application of U.S. patent application Serial No. 08/047,860, filed April 15, 1993 (now abandoned).

Pursuant to the provisions of M.P.E.P. § 609 and in accordance with 37 C.F.R. § 1.98(d), Applicant has not included copies of the documents listed on the 1449 forms which were previously cited by or submitted to the Patent Office in the prior applications identified herein. A copy of the below listed documents are provided herewith as they were not of record in any of the prior applications.

List of Documents, Copies of Which are Listed on 1449 Forms and Provided Herewith

Document	Date	Name/Country
6,077,668	06/20/00	Kool
6,096,880	08/01/00	Kool
6,368,802	04/09/02	Kool
WO 96/00795	01/11/96	PCT
WO 97/19193	05/29/97	PCT
WO 97/20948	06/12/97	PCT
WO 97/43298	11/20/97	PCT
WO 98/04746	02/05/98	PCT
WO 99/09216	02/25/99	PCT
Ali et al., "Enzymatic synthesis of DNA probes complementary to a human variable number tandem repeat locus,", 179(2):280-283 (June 1, 1989).		
Beaucage et al., "The Functionalization of Oligonucleotides Via Phosphoramidite Derivatives," *Tetrahedron*, 49(10):1925-1963 (1993).		
Bledsoe et al., "Molecular homology and DNA hybridization," *J. Mol. Evol.*, 30(5):425-433 (May 1990).		
Egholm et al, "PNA hybridizes to complementary oligonucleotides obeying the Watson-Crick hydrogen-bonding rules," *Nature*, 365(6446):566-568 (Oct. 7, 1993).		
Elroy-Stein et al., "Cytoplasmic expression system based on constitutive synthesis of bacteriophage T7 RNA polymerase in mammalian cells," *Proc. Natl. Acad. Sci. USA*, 87:6743-6747 (Sept. 1990).		
Horn et al., "The Synthesis of Branched Oligonucleotides as Signal Amplification Multimers for Use in Nucleic Acid Assays," *Nucleosides & Nucleotides*, 8(5&6):875-877 (1989).		

Kawai et al., "A simple method of detecting amplified DNA with immobilized probes on microtiter wells," *Anal. Biochem.*, 209(1):63-69 (Feb. 15, 1993).

Ledwith et al., "Preparation of synthetic tandem-repetitive probes for DNA fingerprinting," *Biotechniques*, 9(2):149-152 (Aug. 9, 1990).

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May et al., "DNA fingerprinting by specific priming of concatenated oligonucleotides," *Nucleic Acids Res.*, 19(16), 4557 (Aug. 25, 1991).

Myers et al., "Reverse Transcription and DNA Amplification by a *Thermus thermophilus* DNA Polymerase," *Biochemistry*, 30(31):7661-7666 (Aug. 1991).

Nielsen et al., "Peptide Nucleic Acid (PNA). A DNA Mimic with a Peptide Backbone," *Bioconjungate Chem.*, 1994, 5(1):3-7.

Nilsson et al., "Padlock probes: circularizing oligonucleotides for localized DNA detection," *Science*, 265(5181):2085-2088 (1994).

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Zhou DM, Schultz PG, "Development of synthetic viroids," ABSTR PAP - AM CHEM SOC 222: 194-BIOL Part 1 AUG 2001.

It is believed that no fee is due, as this Information Disclosure Statement is filed prior to the receipt of any Action on the merits. However, in the event a fee is due, please charge any fee or credit any overpayment to Account No. 13-4895.

The Examiner is invited to contact Applicant's Representatives at the below-listed telephone number, if they can be of any assistance during prosecution of the present application.

CERTIFICATE UNDER 37 C.F.R. 1.8:

The undersigned hereby certifies that this paper is being deposited in the United States Postal Service, as first class mail, in an envelope addressed to: Assistant Commissioner for Patents, P.O. Box 2327, Arlington, VA 22202, on this 24th day of June, 2002.

Victoria A. Sandberg

Respectfully submitted for

Eric T. Kool

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June 24, 2002
Date

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INFORMATION DISCLOSURE STATEMENT	Atty. Docket No.: 220.00010150	Serial No.: 09/997,931
		Conf. No.: 5355
	Applicant(s): Eric T. Kool	
	Filing Date: 11/30/01	Group: 1635

U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	SubClass	Filing Date If Appropriate
		4,795,700	01/03/89	Dervan et al.			
		4,837,312	06/06/89	Dervan et al.			
		4,987,071	01/22/91	Cech et al.			
		5,093,246	03/03/92	Cech et al.			
		5,246,921	09/21/93	Reddy et al.			
		5,258,506	11/02/93	Urdea et al.			
		5,354,668	10/11/94	Auerbach			
		5,354,855	10/11/94	Cech et al.			
		5,426,180	06/20/95	Kool			
		5,470,724	11/28/95	Ahern			
		5,498,531	03/12/96	Jarrell			
		5,500,357	03/19/96	Taira et al.			
		5,648,245	07/15/97	Fire et al.			
		5,714,320	02/03/98	Kool			
		6,077,668	06/20/00	Kool			
		6,096,880	08/01/00	Kool			
		6,368,802	04/09/02	Kool			

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	SubClass	Translation	
							Yes	No
		JP 4-262799	09/18/92	Japan (and English Abstract)				X
		JP 4-304900	10/28/92	Japan			X	
		JP 5-146299	06/15/93	Japan			X	
		WO 92/01813	02/06/92	PCT				
		WO 92/17484	10/15/92	PCT				
		WO 94/03630	02/17/94	PCT				
		WO 96/00795	01/11/96	PCT				
		WO 96/33207	10/24/96	PCT				
		WO 97/19193	5/29/97	PCT				

EXAMINER	Date Considered

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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		WO 97/20948	6/12/97	PCT				
		WO 97/43298	11/20/97	PCT				
		WO 98/04746	02/05/98	PCT				
		WO 98/38300	09/03/98	PCT				
		WO 99/09216	02/25/99	PCT				

OTHER DOCUMENTS (Including Authors, Title, Date, Pertinent Papers, etc.)

			"Affinity Chromatography: Practical and Theoretical Aspects," Mohr, Ed., Dekker Publishing: New York, Title page, Copyright page, and Contents pages (pp. v-viii) (1985).
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			Bledsoe et al., "Molecular homology and DNA hybridization," *J. Mol. Evol.*, 30(5):425-433 (May 1990).
			Bock et al., "Selection of single-stranded DNA molecules that bind and inhibit human thrombin," *Nature*, 355:564-566 (1992).
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			D'Souza et al., "Strong Binding of Single-stranded DNA by Stem-Loop Oligonucleotides," *J. Biomolecular Structure and Dynamics*, 10(1):141-152 (1992).
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			Egholm et al, "PNA hybridizes to complementary oligonucleotides obeying the Watson-Crick hydrogen-bonding rules," *Nature*, 365(6446):566-568 (Oct. 7, 1993).
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			Guy-Caffey et al., "Novel Polyaminolipids Enhance the Cellular Uptake of Oligonucleotides," *J. Biol. Chem.*, 270(52):31391-31396 (1995).
			Harshey et al., "A mechanism of DNA transposition," *PNAS USA*, 78:1090-1094 (1981).
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			James, "Towards gene-inhibition therapy: a review of progress and prospects in the field of antiviral antisense nucleic acids and ribozymes," *Antiviral Chemistry & Chemotherapy*, 2(4):191-214 (1991).
			Kanaya et al., "Template-Directed Polymerization of Oligoadenylates Using Cyanogen Bromide," *Biochemistry*, 25:7423-7430 (1986).
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			Kim et al., "Dimethyl Phosphate Hydrolysis at Neutral pH," *J. Am. Chem. Soc.*, 114:9792-9795 (1992).
			Kitajima et al., "Ablation of Transplanted HTLV-I Tax-Transformed Tumors in Mice by Antisense Inhibition of NF-κB," *Science*, 258:1792-1795 (1992).
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			Kool et al., "Abstract of National Institute of General Medical Sciences Grant No. 5R01-GM46625-06," titled "Binding of HIV 1 Sequences by Cyclic Oligonucleotides," (funded in Fiscal Year 1997).

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			Kool, "Circular Oligonucleotides: New Concepts in Oligonucleotide Design," *Annu. Rev. Biophys. Biomol. Struct.*, 25:1-28 (1996).
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			Liu et al., "Rolling Circle DNA Synthesis: Small Circular Oligonucleotides as Efficient Templates for DNA Polymers," *J. Am. Chem. Soc.*, 118:1587-1594 (1996).
			Long et al., "Self-cleaving catalytic RNA," *FASEB*, 7:25-30 (1993).
			May et al., "DNA fingerprinting by specific priming of concatenated oligonucleotides," *Nucleic Acids Res.*, 19(16), 4557 (Aug. 25, 1991).
			Milligan et al., "Oligoribonucleotide synthesis of T7 RNA polymerase and synthetic DNA templates," *Nucleic Acids Res.*, 15(21): 8783-8798 (1987).
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			Møllegaard et al., "Peptide nucleic acid-DNA strand displacement loops as artificial transcription promoters," *PNAS USA*, 91:3892-3895 (1994).
			Myers et al., "Reverse Transcription and DNA Amplification by a *Thermus thermophilus* DNA Polymerase," *Biochemistry*, 30(31):7661-7666 (Aug. 1991).
			"New England BioLabs Catalog," oX174, (1994).
			Nielsen et al., "Peptide Nucleic Acid (PNA). A DNA Mimic with a Peptide Backbone," *Bioconjungate Chem.*, 1994, 5(1):3-7.
			Nilsson et al., "Padlock probes: circularizing oligonucleotides for localized DNA detection," *Science*, 265(5181):2085-2088 (1994).
			Noonberg et al., "Characteristics of Oligonucleotide Uptake in Human Keratinocyte Cultures," *Journal of Investigative Dermatology*, 101:727-731 (1993).
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